## Content Standards Informer

**Curriculum and Instruction Unit** 

October 2010

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#### CSI

The Content Standards Informer (CSI) will be distributed the first Friday of each month through the Content Standards Informer Listserv. If you would like to receive the CSI each month please sign up for the listserv at: <a href="http://lists.opi.mt.gov/mailman/listinfo/contentstandardsinformer">http://lists.opi.mt.gov/mailman/listinfo/contentstandardsinformer</a>

# National Science Board: U.S. Is Squandering Its Most Promising Students

Preparing the Next Generation of Stem Innovators: Identifying and Developing our Nation's Human

*Capital,* released in September by the National Science Board (NSB), paints a bleak picture of an education system that, over the past 50 years, has devolved from recognizing the fundamental need to identify and cultivate the talents of our high-ability students to one that ignores excellence and focuses disproportionately on basic skills.

**Preparing the Next Generation of STEM Innovators** makes a clear call for action focused on three core goals: providing opportunities for excellence, casting a wide net to identify talent, and fostering an education ecosystem that supports our future STEM innovators.

The NSB recommends a number of specific policy strategies to respond to the crisis, including:

- Better preparing teachers and others who are responsible for children in schools to notice and nurture early signs of high ability;
- Holding schools accountable for the achievement of students performing at the top levels, just as
- schools must now be held accountable for low-performing students; and
- Providing federal support to advance programs proven to develop future STEM innovators.

The report also addresses the clear need to focus on identifying talent in economically disadvantaged communities and among minority students, two sectors that for far too long have been overlooked.

For more information or to download the full report go to: http://www.nsf.gov/news/news\_summ.jsp?cntn\_id=117713&org=OLPA&from=n\_ews\_

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#### **Featured School**



# Learning Wall at Rossiter Elementary School, Helena, Montana.

Montana's first Learning Wall has been installed in the library at Rossiter Elementary in Helena. The Parent-Teacher Council provided funds to purchase this new focal point for the library. The unit includes an interactive whiteboard, laptop storage and charging station, materials storage and display panels. The addition of this equipment really highlights the library as learning space in the school. Congratulations to the students, parents and educators at Rossiter for realizing their vision for an up-dated school library. Laura Trapp, Rossiter teacher-librarian (

<a href="https://librarian.nih.gov/librarian-nih.go

# Information Literacy/Library Media

<u>MEA-MFT Conference</u>: School Library Institute, Friday, October 22 9:00-4:00, Helena College of Technology. Please register for the MEA-MFT Conference and join colleagues for a day of sharing and planning library information and technology programs for 21<sup>st</sup> century schools. <u>www.mea-mft.org</u>

MLA (Montana Library Association) Conference – April 6-9, 2011 in Billings. Plan ahead to attend. Visit <a href="https://www.mtlib.org">www.mtlib.org</a> for more details.

NCCE (Northwest Council for Computer Education) Conference –March 1-4, 2011, in Portland, Oregon. The 2<sup>nd</sup> Annual Teacher-Librarian Summit will be held on March 2 during the conference. Visit <a href="www.ncce.org">www.ncce.org</a> for more details.

## **Resources/Sharing:**

Montana Teacher Librarian Wiki: <a href="www.opi.mt.gov/groups/mtl">www.opi.mt.gov/groups/mtl</a>
SLMD Listserv: please contact Colet if you would like to be added to this informative list.

#### **Assessment:**

T.R.A.I.L.S. New tests available for grades 3, 6, 9, 12. <a href="http://www.trails-9.org">http://www.trails-9.org</a>

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#### **Mathematics**



## **Mathematics Resources**

**Free mathematics books** available at http://www.ebooksdirectory.com/mathematics.php.

#### **FINANCIAL LITERACY MATERIALS**

Building Your Future, a program of The Actuarial Foundation, helps teachers do just that, provide accessible content and multiple real-world examples and practice opportunities. You can **download all the materials** at no cost or order the materials at a nominal cost at:

http://www.actuarialfoundation.org/programs/youth/BuildingYourFuture.s html

To **receive a donated set** of *Building Your Future*: e-mail your name, school name, and mailing address to <a href="mailto:programs@actfnd.org">programs@actfnd.org</a>. This program is open to **high school teachers** only. One individual set of materials will be forwarded to you, while supplies last. If desired, you will also be registered to receive a full classroom set (25 student books, 1 set of teacher guides); however, there is no guarantee of receiving a classroom set at this time, it simply allows interested donors to find you.

#### **NCTM TEACHING AND LEARNING SERIES**

September 10, 2010—The National Council of Teachers of Mathematics (NCTM) recently released the Teaching and Learning Mathematics series, which presents research findings to improve mathematics education in schools. Research can demonstrate what is possible for students—what they can learn under specific conditions, how they can reach particular goals, and what kinds of instruction are effective in helping them get there. The three-volume series includes <u>Teaching and Learning Mathematics:</u> <u>Translating Research for School Administrators</u>, as well as parallel volumes for <u>elementary school teachers</u> and <u>secondary school teachers</u>.

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#### Science

# ENVIRONMENTAL SCIENCE CURRICULUM

The University of Wisconsin at Stevens Point GEM (Global Environmental Management) Center is conducting a national survey on environmental science curriculum that incorporates indigenous (Native American) knowledge in the K-12 schools. The organization is looking for the best examples of such curriculum to highlight at a conference to be held in May, 2011.

Since much curriculum is developed at the school district level, they are seeking your help in identifying examples for organization. If you click on the survey link below, it will take you to the online survey. This survey is very short and should take only 2-3 minutes to complete. <a href="http://www.surveymonkey.com/s/VR6DFWZ">http://www.surveymonkey.com/s/VR6DFWZ</a>

#### REAL WORLD DESIGN CHALLENGE

The Real World Design Challenge is an annual high school competition run by a public-private partnership with the goal of sustainably increasing the Science, Technology, Engineering, and Mathematics (STEM) workforce. Students design a plane looking at the forces of flight with the aim of enhancing fuel efficiency. This year's State Challenge will be posted on the RWDC website by mid-September 2010. Registration is open now. For additional information contact Dr. Ralph K. Coppola, Real World Design Challenge Director: phone: 703-298-6630, email: rcoppola@ptc.com, or go to the RWDC website to register a team and learn more www.realworlddesignchallenge.org.

# AAAS'S PROJECT 2061 NEW MIDDLE SCHOOL MATERIALS FOR CHEMISTRY, BIOCHEMISTRY

Project 2061, AAAS's long-term science literacy initiative, is embarking on a new three-year project to design and test classroom and teacher-support materials in the critical areas of middle school chemistry and biochemistry. The materials will help students connect their existing knowledge to new ideas and replace their alternative explanations of phenomena with ones that are more scientifically accurate. In addition, the project will develop materials to help teachers understand the science and new ways of teaching it to their students. Learn more about Project 2061 at <a href="https://www.project2061.org">www.project2061.org</a>.

# **SCIENCE EDUCATION RESOURCES** provided by the Science Matters Network

- Presidential Advisors Release Plan to Improve K–12 STEM Education
- United States Making Mixed Progress in Improving Teacher

#### Learning

- Women Lead In Earning Doctoral Degrees Awarded in the U.S., New Report Finds
- <u>Teacher Education, Professional Development, and Grant and</u> Award Opportunities
  - New Competition for High School Science Educators Announced
  - NEA Foundation Student Achievement Grants
  - NOAA Teacher at Sea Program
  - The Albert Einstein Distinguished Educator Fellowship Program
- <u>Student Competitions</u>
  - Disney's Planet Challenge
  - o NASA's DIME and WING Student Team Competitions
  - Rubber Band Contest for Young Inventors
  - Siemens We Can Change the World Challenge

### NEW EARTH SCIENCE WEEK TOOLKIT

The SEED Earth Science Week Online Toolkit provides educational materials, activities, and other resources. http://www.earthsciweek.org/seed/

# Common Core State Standards (CCSS)

# COMMON CORE STATE STANDARDS (CCSS)

An updated presentation giving background, description of the English/Language Arts and Mathematics document, assessment, professional development and Frequently Asked questions is available at <a href="http://connect.opi.mt.gov/p95032791">http://connect.opi.mt.gov/p95032791</a>.

Thank you to those who have completed the CCSS survey. Please encourage others to take a moment to send feedback via the survey which is on the Office of Public Instruction (OPI) Web site <a href="http://keysurvey.mt.gov/survey/107148/1910/">http://keysurvey.mt.gov/survey/107148/1910/</a>.

Interested in examining the CCSS documents more closely? A guide, Treasure Hunt through English/Language Arts and Mathematics Common Core State Standards, is available for you to examine each document at <a href="http://www.opi.mt.gov/Curriculum/Index.html?gpm=1">http://www.opi.mt.gov/Curriculum/Index.html?gpm=1</a> 7.

More details about the Common Core Standards can be found on the OPI Web site <a href="http://www.opi.mt.gov/Curriculum/Index.html#gpm1\_7">http://www.opi.mt.gov/Curriculum/Index.html#gpm1\_7</a> and the Core Standards Web site. <a href="http://www.corestandards.org/">http://www.corestandards.org/</a>.

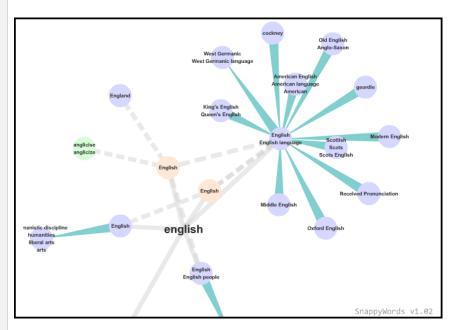
Be certain to attend the fabulous Forum addressing English/Language Arts Common Core State Standards at the Montana State Reading Council Conference in Great Falls, Thursday, October 21, 2010.

The Mathematics Common Core State Standards panel presentation will be at MEA/MFT State Educators Conference Thursday, October 22, 2010. Hope to see you there.

# **READ-WRITE-THINK**

# **Communication Arts**

Have you visited <a href="http://www.readwritethink.org/">http://www.readwritethink.org/</a> lately? This fabulous Web site, created by the International Reading Association and the National Council of Teachers of English has added a professional development section. This section highlights <a href="Online Professional Development">Online Professional Development</a> opportunities, <a href="Meetings and Events">Meetings and Events</a>, and links to an online <a href="Professional Library">Professional Library</a>. In addition, there are <a href="Strategy Guides">Strategy Guides</a> which define and provide examples of effective literacy teaching and learning strategies and offer a wealth of related resources to help sharpen your instruction.



Snappy words <a href="http://www.snappywords.com/">http://www.snappywords.com/</a> is a free visual dictionary and thesaurus. The tool shows the meanings of words and draws connections to associated words. If you have students who fall into a "word rut" have them try this tool.

I look forward to seeing you at the Montana Education Association Conference in Helena and the Montana State Reading Conference in Great Falls October 21-22.

OPI Contact: Kris Goyins, (406) 444-0729, kgoyins@mt.gov

## **Early Grades**

# October is National Parent Involvement Month!

Family Engagement brings benefits to all students, including improved school readiness, higher student achievement, better social skills and behavior, and increased likelihood of high school graduation. Research on school reform also indicates that strong family-school ties are one of the essential elements in transforming low-performing schools. For information and resources, visit www.montanapirc.org.

## Kerpoof! Spell a Picture

Teachers can use this activity in many different ways and it works great on the SMART Board interactive whiteboard. The Web Site is free to use although there are some membership options that might be appealing to some teachers.

http://www.kerpoof.com/#/activity/abc



## Professional Development

# Early Childhood Conference 2010

"One, Two, Buckle My Shoe . . . Three, Four, Let's Explore"

An introduction to the Montana Full-time Model Curriculum Guide and Kindergarten Transition is available to those attending the <a href="MtAEYC">MtAEYC</a>
<a href="MtAEYC">Conference</a>
 in Missoula. This year's conference offers professional development opportunities for adults working with children birth to 8 years of age. The theme offers a math and science emphasis with the keynote presenter being an author and professor from the University of Houston, Juanita Copley. Many other topics will be addressed by a variety of professionals in the field.

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